



P-ISSN: 2394-1685
E-ISSN: 2394-1693
Impact Factor (ISRA): 5.38
IJPESH 2022; 9(1): 49-52
© 2022 IJPESH
www.kheljournal.com
Received: 03-11-2021
Accepted: 07-12-2021

C Gayatri
Research Scholar, Department of
Physical Education, Sri
Padmavathi Mahila
Visvavidyalayam, Tirupati,
Andhra Pradesh, India

G Sarah Sarojini
Professor and Head, Department
of Physical Education, Sri
Padmavathi Mahila
Visvavidyalayam, Tirupati,
Andhra Pradesh, India

Corresponding Author:
C Gayatri
Research Scholar, Department of
Physical Education, Sri
Padmavathi Mahila
Visvavidyalayam, Tirupati,
Andhra Pradesh, India

Effect of plyometric training with yogic practices and plyometric training without yogic practices on physical fitness variables among women cricket players

C Gayatri and G Sarah Sarojini

DOI: <https://doi.org/10.22271/kheljournal.2022.v9.i1a.2500>

Abstract

The Aim of the study was to find out the Effect of Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices on Physical Fitness Variables among Women Cricket Players. The investigator randomly selected 90 women Cricket Players from different colleges in Tirupati and the age of players were between 17 and 21 years. They were divided into three groups with thirty subjects each ($n = 30$) at random again consisting thirty subjects in each group and they were randomly assigned as Experimental group I Plyometric Training with Yogic Practices, Experimental group II Plyometric Training without Yogic Practices and control group (CG). Speed and Agility has selected as criterion variable of this study. The experimental groups underwent Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices for eight weeks, three days per week and a session on each day. The difference between the Pre-test and post-test means were subjected to statistical treatment using ANCOVA, In all cases 0.05 level was fixed to test the hypothesis of the study, which was considered as an appropriate. It was concluded from the result of the study that there was a significant improvement ($p \leq 0.05$) due to Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices on Speed and Agility as compared to control group.

Keywords: Yogic practices plyometric training, speed and agility

Introduction

Physical fitness includes the presentation of the heart and lungs, and the muscles of the body. Furthermore, since how we manage our bodies likewise impacts how we can manage our psyches, wellness impacts somewhat characteristics like mental sharpness and enthusiastic security. Importance of physical fitness is nurtured only when man exhibits his innocence to stand as a complete individual in the society. The society believes that to lead successful life one should attain victories in all his ventures. But success should not be assessed through number of victories; it should be assessed only through pains and problems that you overcome.

Plyometric training is the key to developing maximal explosive power through speed of movement which in turn, the key elements involved in sports. By doing various forms of plyometrics exercises, muscles become loaded or coiled and then the energy accumulated from the loading is switched in direction so that body becomes unloaded and is the process is propelled upward and forward. At this time, muscles act as springs. They undergo compression, which builds up tension (force) and after being fully loaded (compressed), then they expand to their original shape and in so doing release the force upward (Michael, 1986).

Yoga is the fine tuning of the human body or engine. It enables us to perform up to our potential. Yoga can be described as a condition that helps us for better look, pleasant feel and do our best. Yoga, a conscious and systematic process to accelerate the growth of human mind, is now emerging as a new tool in this search. meditation, in particular, is providing man a means to reach the subtle layers of mind. It has been shown through the experimental results on meditation; that knowledge and creativity are structured in subtler layers of mind or deeper states of science are now being found in deeper states if our consciousness. Brought a breakthrough in unraveling the hidden dimensions of mind. (Iyengar, 2001).

Materials and methods

The purpose of the study was to find out the Effect of Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices on Physical Fitness Variables among Women Cricket Players. The investigator randomly selected 90 women Cricket Players from different colleges in Tirupati and the age of players were between 17 and 21 years. The selected subjects were randomly divided into three equal groups of thirty subjects each ($n = 30$). Experimental group I is assigned as Plyometric Training with Yogic Practices and Experimental group II is assigned as Plyometric Training without Yogic Practices and control group. During the training period, the experimental groups underwent their respective training programme for eight weeks 3 days per week. Control group (CG) did not participate in any specific training. Speed and Agility were

selected as dependent variable for this study. It was measured by Speed and Agility through 50 yard dash and shuttle run test. Pre-test was conducted before experimental treatment. The fact finding assists in Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices. Post-test was conducted after experimental treatment. The collected data were statistically examined by analysis of covariance (ANCOVA). The confidence level was fixed at 0.05 levels, which is appropriate to the present study

Results on Speed

The statistical analysis comparing the Initial and Final means of Speed due to Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices among women Cricket Players is presented in Table I

Table I: Analysis of Covariance on Speed of Experimental Groups and Control Group

Test	Plyometric Training with Yogic Practices	Plyometric Training without Yogic Practices	Control group	SOV	SS	DF	MS	f - ratio
Pre Test Mean	10.70	10.59	10.81	Between	0.72	2	0.36	0.27
				Within	114.86	87	1.32	
Post Test Mean	9.25	9.59	10.75	Between	37.22	2	18.60856778	31.24*
				Within	51.82	87	0.60	
Adjusted Post Test Mean	9.24	9.62	10.72	Between	35.06	2	17.53	35.61*
				Within	42.34	86	0.49	

The value of required for significant at 0.05 levels with 2 and 87 (df) = 3.10, 2 and 86 (df). 3.10 *Significant

Pre-Test: The obtained pre test means on Speed on Plyometric Training with Yogic Practices group was 10.70, and Plyometric Training without Yogic Practices group was 10.59 and Control group was 10.81. The obtained pre test F value was 0.27 and the required table F value was 3.10, which proved that there was no significant difference among initial scores of the subjects.

Post – Test: The obtained post test means on Speed on Plyometric Training with Yogic Practices group was 9.27 and Plyometric Training without Yogic Practices group was 9.59 and Control group was 10.75. The obtained post test F value was 31.24* and the required table F value was 3.10,

which proved that there was significant difference among post test scores of the subjects.

Adjusted Post – Test: Taking into consideration of the pre test means and post test means adjusted post test means were determined and analysis of covariance was done and the obtained F value 35.61* was greater than the required value of 3.10 and hence it was accepted that there was significant differences among the treated groups. Since significant differences were recorded, the results were subjected to analysis using Scheffe's post Hoc Confidence Interval test. The results were presented in Table II.

Table II: Multiple Comparisons of Paired Adjusted Means and Scheffe's Post Hoc Confidence Interval Test results on Speed

Means				Mean Difference	Confidence Interval
Plyometric Training with Yogic Practices	Plyometric Training without Yogic Practices	Control Group			
9.24	9.62		0.38	0.45	
9.24		10.72	1.47*	0.45	
	9.62	10.72	1.10*	0.45	

* Significant

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Plyometric Training with Yogic Practices and control group (MD: 1.47*). There was significant difference between Plyometric Training without Yogic Practices and control group (MD: 1.10*). There was no significant difference between treatment groups, namely, Plyometric Training with Yogic Practices and Plyometric Training without Yogic

Practices. (MD: 0.38).

Results on Agility

The statistical analysis comparing the Initial and Final means of Agility due to Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices among women Cricket Players is presented in Table III.

Table III: Analysis of Covariance on Agility of Experimental Groups and Control Group

Test	Plyometric Training with Yogic Practices	Plyometric Training without Yogic Practices	Control group	SOV	SS	DF	MS	f - ratio
Pre Test Mean	11.79	11.75	11.64	Between	0.36	2	0.18	0.89
				Within	17.76	87	0.20	
Post Test Mean	10.75	10.84	11.63	Between	14.05	2	7.02331	23.16
				Within	26.38	87	0.30	
Adjusted Post Test Mean	10.71	10.82	11.68	Between	16.56	2	8.28	35.97
				Within	19.80	86	0.23	

The value of required for significant at 0.05 levels with 2 and 87 (df) = 3.10, 2 and 86 (df). 3.10 *Significant

Pre-Test: The obtained pre test means on agility on Plyometric Training with Yogic Practices group was 11.79 and Plyometric Training without Yogic Practices group was 11.75 was and Control group was 11.64. The obtained pre test F value was 0.89 and the required table F value was 3.10, which proved that there was no significant difference among initial scores of the subjects.

Post – Test: The obtained post test means on Sagility on Plyometric Training with Yogic Practices group was 10.75 and Plyometric Training without Yogic Practices group was 10.84 was and Control group was 11.63.. The obtained post test F value was 23.16* and the required table F value was

3.10, which proved that there was significant difference among post test scores of the subjects.

Adjusted Post – Test: Taking into consideration of the pre test means and post test means adjusted post test means were determined and analysis of covariance was done and the obtained F value 35.97* was greater than the required value of 3.10 and hence it was accepted that there was significant differences among the treated groups. Since significant differences were recorded, the results were subjected to analysis using Scheffe's post Hoc Confidence Interval test. The results were presented in Table IV.

Table IV: Multiple Comparisons of Paired Adjusted Means and Scheffe's Post Hoc Confidence Interval Test results on Agility

Means				Confidence Interval
Plyometric Training with Yogic Practices	Plyometric Training without Yogic Practices	Control Group	Mean Difference	
10.71	10.82		0.11	0.31
10.71		11.68	0.97	0.31
	10.82	11.68	0.86	0.31

* Significant

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Plyometric Training with Yogic Practices and control group (MD: 0.97*). There was significant difference between Plyometric Training without Yogic Practices and control group (MD: 0.86*). There was no significant difference between treatment groups, namely, Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices. (MD: 0.11).

Discussions and Conclusions

The aim of this study was to examine the effects of selected Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices on Physical fitness variables of women Cricket players. Results suggest that eight weeks of Plyometric Training with Yogic Practices and Plyometric Training without Yogic Practices resulted in a significant increase in Speed and Agility record at the end of the training period. However, there was an insignificant difference between the training groups.

References

- Adams TM. "An investigation of selected plyometric training exercises on muscular leg strength and power" Track field Quarterly Review, 1984, 84-36.
- Gharote ML. Guidelines for Yogic Practices, Lonawala: Medha Publications, 1982, P.51.
- Batisti Cristiane Ferreira, Pamela dos Santos Teixeira, Geiane Alves dos Santos, and Otavio de Toledo Nobrega. Effects of a 12-Week Exercise Training Program on Physical Function in Institutionalized Frail 147 Elderly, Journal of Aging Research, Volume 2018,

Article ID 7218102, 2018, 8pages.

- Iyengar BK, Sundara Raja. Light on Yoga Corey, G. (March 2000). Theory and practice of counseling and psychotherapy (6th ed.). Belmont, CA: Wadsworth Publishing Co. 1995, pp. 550
- Iyengar BKS. The Gift of Yoga, (New Delhi: Harpers Collins Publications India Pvt Ltd., 1999, p.394.
- Swami Kunalayananda, Asana, (India: Lonavala: Kaivalyathama), 1977.
- Ananda R. The Complete Book of Yoga Harmony of Body Mind, (Delhi: India), 1982.
- Vladimir M, Zatsiorsky William J. Kraemer. Science and practice of strength training, (2nd Ed). South Australia, 2006.
- Tania Cassidy, Robyn L Jones, Paul Potrac. Understanding Sports Coaching: The Social, Cultural and Pedagogical Foundations of Coaching Practice, 2008.
- Uppal AK. Physical Fitness and Wellness, Friends Publications, New Delhi, 2004, P. 3.
- Hardayal Singh. Sports Training General Theory and Method (Patiala: Netaji Subas National Institute of Sports, 1984), p. 148.
- Karal A. Book Walter. Foundations and Principles of Physical Education, Philadelphia: W.B. Saunders Company, 1969.
- Astrand P, Kaaxe R. Text Book of Work Physiology, New York: McGraw Hill Book Company, 1977, P. 27.
- Avery d, Faigenmbanum, jams E Mc Fordland. "Effects of a short- term plyometric and resistance training programme on fitness", journals of sports science and medicine. 2007;6:519-525.

15. Brown GA, Rax MW, Abbey BM, Shaw BS, Shaw I. "Oxygen consumption, heart rate, and lactate responses to an acute bout of plyometric depth jumps in college aged Men and Women", P. 106, Journals of Strength Conditioning Research. 2010;25(9):2475-82.
16. Shukla. Effect of plyometric exercises on physical fitness component speed in cricket players, International Journal of Physical Education, Sports and Health. 2019; 6(2):03-04.
17. Charles A Bucher. Administration of School Health and physical Education programme, (St. Louis: The C.V. Mosby Company, 2nd Ed., 1978), p.196.
18. Davis B. Training for physical fitness. In: Physical Education and the study of sport. Spain: Harcourt Publishers, 2000, p.121-122.
19. Caputo F, Denadai BS. "Effects of aerobic endurance training status and specificity on oxygen uptake kinetic during maximal exercise European journals of applied physiology. 2004;93(1-2):87-95.
20. Castagna C, Maniziv Dottavio S, Annino G, Padua E, Bishop D. "Relation between maximal aerobic power and the ability to repeat sprints in young basketball players" Journal of applied physiology. 2007;87(3):1003-1008.
21. Castagna Cj, Abt G, Manzi V, Annio G, Padua E, Dottavia S. "Effects of recovery mode on repeated sprint ability in young basketball players" Journal of strength and conditioning research. 2008;22(3):923-9.
22. Chatzinikolaou A, Fatouros IG, Gourgoulis V, Avloniti A, Jamurtas AZ, Nikolaidis MG, *et al.* "Time course of changes in performance and inflammatory responses after acute plyometric exercise". Journal of Strength Conditioning research. 2010;24(5):1398-98.